

IN THE CLAIMS:

Please replace claim 16 as follows:

16. (Amended) The magnetic recording medium according to claim 15, wherein the mismatches  $\Delta 1$ ,  $\Delta 2$  further satisfy the following relationships:

A 2  $\Delta 2 < \Delta 1 < 10.25$ ; and

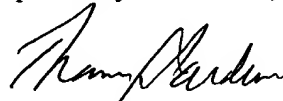
$(5/10.25) < (\Delta 2/\Delta 1) < 1$ .

REMARKS

Claims 1 - 31 are pending. By this Preliminary Amendment, the specification and claim 16 are amended. Prompt and favorable examination on the merits is respectfully requested.

The attached Appendix includes marked-up copies of the rewritten paragraph and claim (37 C.F.R. 1.121(c)(1)(ii)).

Respectfully submitted,



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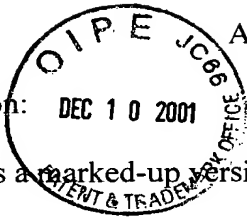
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Attachment:  
Appendix

Date: December 10, 2001

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## APPENDIX

Changes to Specification:

DEC 10 2001

The following is a marked-up version of the amended paragraph:

[0048]

Fig. 1 shows a cross-sectional structure of a magnetic disk according to a first embodiment.

Fig. 2 shows a cross-sectional structure of a modified embodiment of the magnetic disk according to the first embodiment.

Fig. 3 shows a cross-sectional structure of another modified embodiment of the magnetic disk according to the first embodiment.

Fig. 4 shows a graph illustrating a hysteresis loop (major loop) of the magnetic disk according to the first embodiment.

Fig. 5A shows a minor loop of the hysteresis loop shown in Fig. 4, and Fig. 5B shows a minor loop of a hysteresis loop of a magnetic disk concerning Comparative Example 1.

Fig. 6 shows a schematic cross-sectional structure of a magnetic disk according to a fourth embodiment of the present invention.

Fig. 7 shows a cross-sectional structure of the magnetic disk concerning Comparative Example 1.

Fig. 8 shows a schematic arrangement of an exemplary magnetic recording apparatus according to a second embodiment of the present invention as viewed from a position thereover.

Fig. 9 shows a sectional view as viewed in a direction of A-A' illustrating the magnetic recording apparatus shown in Fig. 8.

Fig. 10 shows a schematic sectional view illustrating a magnetic disk produced in a third embodiment of the present invention.

Fig. 11 shows graphs illustrating a hysteresis loop (major loop) of the magnetic disk

shown in Fig. 10, and a magnified view of a minor loop of the hysteresis loop.

Fig. 12 shows a schematic sectional view illustrating a modified embodiment of the magnetic disk according to the third embodiment of the present invention.

Fig. 13 shows a schematic sectional view illustrating another modified embodiment of the magnetic disk according to the third embodiment of the present invention.

Fig. 14 shows a graph illustrating a hysteresis loop (major loop) of a magnetic disk according to a fourth embodiment.

Fig. 15 shows a graph illustrating a relationship between a film thickness of a lattice spacing-adjusting layer and a coercive force of a recording layer and a relationship between the film thickness of the lattice spacing-adjusting layer and an exchange coupling magnetic field concerning the magnetic disk according to the fourth embodiment.

Fig. 16 schematically shows a minor loop of the hysteresis loop shown in ~~Fig. 2~~ Fig. 14.

Fig. 17A shows a graph illustrating the change of exchange coupling energy with respect to the ferromagnetic atom (Co) concentration of a ferromagnetic atom-rich layer, and Fig. 17B shows a graph illustrating the change of  $(K_u \bullet V)/k_B \bullet T$  with respect to the ferromagnetic atom (Co) concentration of the ferromagnetic atom-rich layer.

Fig. 18 shows a sectional view illustrating a structure of a conventional magnetic disk.

#### Changes to Claims:

The following is a marked-up version of the amended claim:

16. (Amended) The magnetic recording medium according to claim 15, wherein the mismatches  $\Delta 1$ ,  $\Delta 2$  further satisfy the following relationships:

$$\Delta 2 < \Delta 1 < 10.25; \text{ and}$$

$$(5/10.25) < (\Delta 1/\Delta 2) < 1 \quad \underline{(5/10.25) < (\Delta 2/\Delta 1) < 1}.$$